

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C, 20554**

In the Matter of:

AMENDMENT OF PART 97 OF)	
THE COMMISSION’S RULES)	
GOVERNING THE AMATEUR RADIO)	RM-10867
SERVICE TO IMPLEMENT CHANGES)	
TO ARTICLE 25 OF THE INTERNATIONAL)	
RADIO REGULATIONS ADOPTED AT)	
THE 2003 WORLD RADIOCOMMUNICATION)	
CONFERENCE)	

**Comment of Peter D. Baskind
N4LI**

I. Introduction.

A. Background.

Before the Commission is a contentious, but important issue. Various Petitions have come before the Commission regarding the future of the Morse Code test for amateur radio licensure below 30 Mhz. This discussion was precipitated when the World Radio Communication Conference 2003 relaxed the International requirement that Morse Code testing be required for operators below 30 MHz, the area commonly known as High Frequency (“H.F.”). Therefore, discretion lies with the FCC to eliminate such testing, or continue it.

While almost countless Petitions have come up for comment, the recent Petition by the American Radio Relay League is arguably the highest in profile.¹ This Comment is intended to be a direct comment to the ARRL proposal, but the comments are also germane to the remaining petitions.

B. Commenter Peter D. Baskind

Commenter, Peter D. Baskind, is an Extra Class licensee operating under call sign N4LI. Residing in Germantown, Tennessee, he is licensed to practice law in the State of Tennessee. He holds both Juris Doctor and Master of Laws degrees. While Commenter Peter D. Baskind is a member of the ARRL, he submits this Comment in his personal capacity, and not as a member, representative or agent of the ARRL.

II. The ARRL Proposal.

A. Overview

The ARRL's proposal has significant merit, but is far from being a perfect plan. The League is attempting to balance two schools of thought in amateur radio – many argue that Morse Code is indispensable to the service and that Morse testing should continue, while others strongly feel that Morse Code is antiquated, or at the very least just another mode that is not deserving of the special status that Code has enjoyed over the years. It is, seemingly, almost a religious discussion with neither camp seeing merit in the arguments of the other.

¹ See *In the Matter of Amendment of Part 97 of the Commission's Rules Governing the Amateur Radio Service to Implement Changes to Article 25 of the International Radio Regulations Adopted at the 2003 World Communication Conference*, Docket RM-10867. The American Radio Relay League is a corporation involved in the promotion of amateur radio. See *id.* at ¶ 1.

The ARRL has attempted to “split the baby” between the two schools of thought, opening up H.F. communications on a limited basis to those who have not passed the Code test, yet maintaining the Code test for the high-end “Extra Class” license.

A major foundation to the ARRL proposal is simplification of the license structure.² Under the current regime, there are six license classes.³ The League wishes to consolidate the classes into just three – a new “Novice” Class, the General Class, and the Amateur Extra Class. There are many positive aspects to the plan. The new entry-level Novice Class license could be a boon to the hobby, bringing new blood into the amateur community while maintaining incentive licensing. The League’s plan to fold current Novice Class licensees into this class, however, weakens the proposal as it reduces some operating privileges for those current licensees. The greatest weakness of the ARRL’s holistic plan is its reckless assertion that current Technician Class licensees should be upgraded automatically to General. This idea is not just unjustified, it has the potential to be damaging to the Amateur Radio Service.

B. The “New” Novice.

The centerpiece to the ARRL’s proposal is creation of a new Code-free entry-level license class. Under our current licensing scheme, the Technician Class license is the usual beginning route to amateur radio. The Technician Class license allows an operator full amateur privileges above 50 Mhz, a very wide range of frequencies, indeed.⁴

² See *id.* at ¶¶ 10-11.

³ See *id.* at ¶ 10.

⁴ See 47 C.F.R. § 97.301(a).

But, the Codeless Technician Class license does not allow access to any frequency on H.F.

The ARRL believes that lack of access to the international H.F. bands is limiting to a new ham. They state, “[t]his leads to disinterest, and to failure to upgrade one’s license class, and it focuses the mindset of licensees on local communications.”⁵ The League advocates, therefore, a new entry-level license class it calls “Novice.”⁶ This new license would not require passage of a Morse Code test. It would allow limited use of the H.F. spectrum, including large chunks of 80, 40, 15, and 10 meters, as well as extensive access to the V.H.F. bands. Applicants would only have to pass a twenty-five question multiple choice exam⁷ that one assumes would be rather easy, compared to other licensing tests. Novice licensees would be limited to 100 watts below 10 meters, and 50 watts from 10 meters through the higher bands.⁸ This approach, it seems, is intended to give new operators a taste of the bands, while maintaining an incentive to upgrade and advance in the hobby.⁹

⁵ See *In the Matter of Amendment of Part 97 of the Commission’s Rules Governing the Amateur Radio Service to Implement Changes to Article 25 of the International Radio Regulations Adopted at the 2003 World Communication Conference*, Docket RM-10867 at ¶ 15. While Commenter really does not quarrel with the idea of allowing access to H.F. to new licensees, the ARRL’s assessment of the Technician Class’s limitations are a bit off the mark. The ARRL is a multi-service organization. One of their many services is making awards available to operators who have completed certain benchmarks on the ham bands. The League has handed out many awards to VHF-only operators. Six meters, in particular, is a band that, when conditions are right, allows wide access to the country and even the world. This Commenter, as a matter of fact, has recently received the League’s Worked All States (WAS) award for six meter operations. This award, and others, are within reach of a Codeless Technician. For more information on ARRL awards, see <http://www.remote.arrl.org/awards/>.

⁶ See *id.* at ¶ 18.

⁷ The content of this exam is not discussed in significant detail in the ARRL proposal.

⁸ See *id.*

⁹ See *id.*

Commenter applauds the League's attempt at formulating a new license. For many, a rudimentary exam that allows access to most aspects of the amateur radio hobby can be nothing but positive. Beyond perpetuating of the hobby, this idea will deepen the pool of licensed operators who are able to aid in emergency communications and community service. Commenter agrees with the ARRL that requirement of Morse Code testing at this early stage in the career of a hobbyist is unnecessary. Commenter, therefore, has no opposition to formation of a new Novice Class license.

Commenter does, however, take issue with the ARRL's suggestion that current Novice Class licensees be simply rolled into this new entry-level class. Contrary to the assertion of the ARRL, this may do a disservice to these often long-time license holders. According to the ARRL, "no currently licensed amateur would, in aggregate, lose operating privileges, or be subject to additional regulatory limitations."¹⁰ This is simply untrue.

Under our current licensing scheme, Novice Class licensees are allowed as much as 200 watts input on the H.F. bands.¹¹ Under the new plan, those licensees, when rolled into the "new" Novice, would only be allowed 100 watts below 10 meters, and only 50 watts on 10 meters H.F. While it is understandable why the ARRL would want to limit power for those taking this new rudimentary exam they advocate, it does not follow that current Novices should be so limited. Theoretically, a Novice, now licensed for years, may find himself allowed 200 watts on 10 meters one day, and only allowed 50 watts the

¹⁰ *See id.* Commenter is confused by the League's use of the phrase "in aggregate." Either a licensee does privileges, or he does not. One does not need to resort to "aggregation" to divine this fact.

¹¹ See 47 C.F.R. § 97.313(c).

next. His continuous wave communications on the old “Novice Bands” would also have new power limitations. This makes no sense.

The solution to the downgrading of current Novice licensees can be solved one of two ways. First, we could maintain the Novice Class licensees as they are, and designate the new entry-level license the ARRL advocates another term. However, this seems to run counter to the League’s assertion that the number of license classes must be reduced. As it states, “it is absolutely necessary to eliminate the legacy licenses left over after the Docket 98-143 proceeding.”¹² The ARRL fails to give any real support for this blanket statement, neglecting to justify why maintaining a “legacy” class is little more than a minor computer database issue. The Commission seems to agree. In 1998, while concluding that new grants on Novice Class licenses were unnecessary, the Commission chose to allow then-current Novices to keep their license class indefinitely.¹³ There are no persuasive arguments why this should change.

A separate option would allow current Novices to be upgraded to General, as the ARRL advocates for current Technician Class licensees. Interestingly, the ARRL

¹² See *id.* at ¶ 17.

¹³ In that 1998 proceeding, the Commission found that the burden of maintaining a test for six classes of license might be too much for the Volunteer Examiners (“VEs”):

Each time that an amateur operator moves to a higher class, the VEs must prepare and administer an examination, and the Commission must process a license transaction to modify the data base and issue a license document. While we continue to believe there should be a number of license classes sufficient to encourage amateur operators to advance their skills in meaningful ways, six classes of operator licenses may be unnecessary. Reducing the number of classes of operator licenses would relieve the VEs from the tasks of preparing and administering unnecessary examinations. It would also ease the Commission's burden of providing oversight of the system and maintaining a data base of the current operator class for every amateur operator.

See *In the Matter of 1998 Biennial Review*, 13 FCC Rcd. 15,798 at ¶ 11 (1998). It seems that the Commission, while mentioning data base issues in passing, was far more concerned about testing issues for multiple classes. The Commission did, after all, grandfather the Novice Class, and allow it to be renewed.

avored such an upgrade in 1998.¹⁴ Why the ARRL sees Technicians as deserving of automatic upgrade today while not advocating it for Novices can best be described as mysterious.

In the final analysis, the ARRL erred in proposing new and old Novices be grouped together. It is not necessarily a bad idea to give the current Novice license holder more privilege, such as access to the popular 2 meter band, but it is unfair to remove the power privileges that those licensees have responsibly used and enjoyed for many years. This part of the ARRL Petition is flawed.

C. Automatic Upgrade of Technician Class to General

While the ARRL does not favor automatic upgrade of Novice Class licensees, it does favor automatic upgrade of Technician Class licensees to the General Class license. This proposal has caused some “real heartburn” for much of ARRL’s membership.¹⁵ The ARRL, while attempting to allay fears of those in opposition, justifies the proposal by stating, “today’s Technician exam covers the bulk of all amateur radio practices and privileges, very similar to the material covered in today’s General written examination.”¹⁶ This blanket statement is just too broad.

¹⁴ See *In the Matter of Amendment of Part 97 of the Commission’s Rules Governing the Amateur Radio Service to Implement Changes to Article 25 of the International Radio Regulations Adopted at the 2003 World Communication Conference*, Docket RM-10867 at ¶ 17.

¹⁵ See the ARRL’s “FAQ” on its Proposal at <http://www.remote.arrl.org/news/restructuring2/faq.html#4>.

¹⁶ See *id.* See also *In the Matter of Amendment of Part 97 of the Commission’s Rules Governing the Amateur Radio Service to Implement Changes to Article 25 of the International Radio Regulations Adopted at the 2003 World Communication Conference*, Docket RM-10867 at ¶ 20 (“The only substantial difference between Technician and General Class license examinations was the Morse telegraphy requirement; the written examinations are similar, and the elimination of the Morse telegraphy requirement for the General Class license proposed herein would make the upward merger a natural and minor step.”)

This Commenter is not opposed to upgraded licensees who are well-positioned for an upgrade. But even a cursory comparison of the General and Technician question pools makes it clear that the exams are in no way analogous, despite the statements of the ARRL to the contrary.¹⁷ In fact, the first questions in the General Class question pool quiz the candidate on allowed frequencies and bands.¹⁸ Technicians, under the ARRL plan, would have access to frequencies and bands about which the licensees have never shown working knowledge – certainly a troubling fact. Those examinees also have not been tested on H.F. band plans, the foundation of courtesy and harmony on the H.F. spectrum. Some frequencies and bands have specific power level limits. These are tested on the General Class exam; they are not tested for Technicians.¹⁹ Specific questions about important power amplifier questions are omitted in the Technician question bank.²⁰ Technicians are not tested for wide knowledge of digital modes on H.F., which, since Morse Code is not to be tested under the new plan, would be a major draw for new instant Generals.²¹ Section G3 of the General Class exam, the radio propagation section, is much more comprehensive than the scant material in the Technician test. Section G3,

¹⁷ Commenter is puzzled by the ARRL's statement that "the written [Technician and General Class] exams are similar." *In the Matter of Amendment of Part 97 of the Commission's Rules Governing the Amateur Radio Service to Implement Changes to Article 25 of the International Radio Regulations Adopted at the 2003 World Communication Conference*, Docket RM-10867 at ¶ 20. If that were indeed the case, it would seem odd that the Commission chose to have two separate exams. Clearly, there are major differences in the question pools that are lost on the League.

¹⁸ See §G1A General control operator frequency privileges.

¹⁹ See §G1C Transmitter power standards; certification of external RF- power-amplifiers; standards for certification of external RF-power amplifiers; HF data emission standards. This same section quizzes the candidate on power amplifiers, and illegal sale of amplifiers. Obviously, knowledge of this can keep an operator out of trouble.

²⁰ See §G1F. Certification of external RF-power-amplifiers; standards for certification of external RF-power amplifiers; HF data emission standards.

²¹ See *id.*

Amateur Radio Practices, is quite complex compared to the Technician test.²² While simple calculations such as Ohm's Law can be found on the Technician test, calculations and formulae on the General are clearly on another level.²³ Along the same lines, the section entitled "Electrical Principles" is much more difficult than the questions tendered to Technicians.²⁴ The General Class question bank also contains significant depth in its circuit components and practical circuits sections.²⁵ Doubtless many of the exam questions are enough to "fry the circuits" of many unprepared Technician Class licensees. The exam also quizzes candidates on important signal emission issues and issues of bandwidth and deviation.²⁶ In short, there is much important material on the General Class exam that is omitted on the Technician. This information is not just convenient to

²² One question from this section, chosen almost at random, seems downright obtuse compared to the relative ease of the Technician exam:

G4A03 @G4A03 (D)

What audio frequencies are used in a two-tone test of the linearity of a single-sideband phone transmitter?

- A. 20 Hz and 20-kHz tones must be used
- B. 1200 Hz and 2400 Hz tones must be used
- C. Any two audio tones may be used, but they must be within the transmitter audio passband, and must be harmonically related
- D. Any two audio tones may be used, but they must be within the transmitter audio passband, and should not be harmonically related

See id at §G4A.

²³ See, e.g., question G4D03:

G4D03 @G4D03 (B)

How is the output PEP of a transmitter calculated if an oscilloscope is used to measure the transmitter's peak load voltage across a resistive load?

- A. $PEP = [(V_p)(V_p)] / (RL)$
- B. $PEP = [(0.707 \text{ PEV})(0.707 \text{ PEV})] / RL$
- C. $PEP = (V_p)(V_p)(RL)$
- D. $PEP = [(1.414 \text{ PEV})(1.414 \text{ PEV})] / RL$

Id.

²⁴ See § G5A Impedance, including matching; resistance, including ohm; reactance; inductance; capacitance; and metric divisions of these values.

²⁵ See §§ G6, G7.

²⁶ See §§ G7, G8

grasp, it may be vital to keep an operator on the air safely, within band, within the bounds of courtesy, and within regulation. The vast majority of Technician Class licensees are excellent operators, and a credit to the Amateur Radio Service. Dealing with the entire Technician population *en mass*, however, and assuming all are ready for full legal limit access to H.F., is unwise.

A recent decision by the Commission implies that the Commission is not inclined to grant automatic upgrades such as the one being advocated. In answering the ARRL's 1998 proposal to upgrade Novice licensees to General, the Commission flatly stated, "we note that the privileges of the General Class license in the M.F. and H.F. bands are significantly different than a Novice Class licensee."²⁷ If that was the feeling of the Commission in 1998, it stands to reason that nothing has changed that would precipitate a sea-change in Commission thinking. The Technician test was written, primarily, with the V.H.F. operator and the beginner H.F. operator – one with H.F. privilege identical to today's Novice licensees - in mind. To borrow a term from the Commission, the privileges of the Technician and General Classes are "significantly different." The Commission should not automatically upgrade Technicians to General Class.

D. Upgrade of Advanced Class Licensees to Amateur Extra

²⁷ See *In the Matter of 1998 Biennial Review*, 13 FCC Rcd. 15,798 at ¶ 15 (1998). The ARRL, in its Petition, took issue with the Commission's position, calling it "unpersuasive," as this grandfathering fails to streamline the license system. *In the Matter of Amendment of Part 97 of the Commission's Rules Governing the Amateur Radio Service to Implement Changes to Article 25 of the International Radio Regulations Adopted at the 2003 World Communication Conference*, Docket RM-10867 at ¶ 17. While that may or may not be so, that argument fails to contemplate one important fact – it is the Commission, not the ARRL, which is the final arbiter in this cost-benefit analysis. Apparently, the Commission found the benefits of keeping the Novice Class more important than "streamlining." Maintaining the integrity of the licensing system was more important than simple administrative convenience.

The weaknesses of the ARRL's arguments in automatic upgrading of Technicians to General Class are not applicable in its plan to upgrade Advanced license holders to Amateur Extra. Unlike the comparison of the Technician to General Class tests, which finds the Technician Class test lacking, the Advanced Class license test was very comprehensive, indeed. The Commission seems to agree. In 1998, while still declining to upgrade the Advanced Class licensees, the Commission stated, "the primary difference between the Advanced Class operator license and the Amateur Extra Class operator license is not the difficulty of the Amateur Extra written examination, but, rather, the 20 wpm telegraphy examination...."²⁸ Few disagree on this point.

Privileges of Amateur Extra Class licensees and those of Advanced Class licensees are very similar. Advanced and Extra Class operators have access to the same bands.²⁹ Only a few kilohertz of bandwidth on a few bands separate the operators of the classes.³⁰ To continue two license classes over such razor thin differences is unnecessary. Amateur Extra and Advanced Class licenses should be merged.³¹

E. Roll-back of Morse Code testing Generally.

²⁸ See *id.* at ¶ 15.

²⁹ See 47 C.F.R. §1301(b), (c).

³⁰ See *id.*

³¹ Merging the Extra and Advanced Class licenses would allow the Commission to merge Group A and Group B call sign groups. Since there will be no Advanced Class licensees, the B Group of signs, 2x2 signs beginning with N, K, or W, would be simply made available to Extras only.

The ARRL in its Petition suggests a significant reduction in the number of examinees being tested on Morse Code. Only candidates sitting for the Extra Class license test would be required to pass a 5 word per-minute Morse Code test.³²

Much ink has been spilled in the past several months regarding the benefits of keeping or ending the Morse Code requirement. There is little more to be added, so this Comment will spend little time on this issue. But, it seems that the ARRL proposal is as close to a compromise to all sides as one can expect. Certainly, there is benefit to keeping a pool of some operators – in this case, Extras – who have a working knowledge of Morse Code and continuous wave communications. Propagation beacons, repeaters identifications, and other automatically controlled stations will continue to identify in Morse, and only those with knowledge of the Code will be competent to identify these transmitters. Further, there will always be call for C.W. communications on the H.F. bands.

Learning slow Morse Code is not an onerous task. Expecting the elite of the amateur community to maintain some ability in Morse Code is not unreasonable. The Commission should maintain the 5 word per-minute requirement for the Amateur Extra Class license.

III. Conclusion

The ARRL licensing proposal is not without its benefits. The proposal for a new, easy entry license class may be good for the amateur community as long as operating privileges remain within limits. But, some of the details are short-sighted, and possibly

³² *In the Matter of Amendment of Part 97 of the Commission's Rules Governing the Amateur Radio Service to Implement Changes to Article 25 of the International Radio Regulations Adopted at the 2003 World Communication Conference*, Docket RM-10867 at ¶ 22.

dangerous. The ARRL has allowed its desire to “simplify” the licensing system to cloud its judgment regarding the integrity of the overall system. The League should be focusing more on licensing that makes sense rather than its licensure streamlining plans.

The proposal to lump both old and new Novices together gives long-time licensees unfair treatment. There is no logical reason why these operators should have to live with the new power restrictions that would be imposed upon them. Those long-term licensees seem to be the “ugly stepchild” of amateur radio in the ARRL’s eyes, being the only license class unworthy of upgrade. While Technicians get significant new privilege, the Novices are forgotten. Should the Commission see fit to enact a new entry-level class, they should keep in mind that many Novices remain active, and should not be tossed aside. The Commission should not simply condense the new and old Novice classes together; that would do a disservice to some of the hobby’s most trusted operators.

The League’s proposal to automatically upgrade all Technician licensees – including those with and without Code credit – is irresponsible. Such a move would add countless new operators to the international bands who have never demonstrated any aptitude for those frequencies. To be sure, the Codeless Technicians may be deserving of some new privilege – perhaps H.F. access not unlike current Novices – but, to widely open the bands to the uninitiated could cause irreparable damage. The League’s arguments in favor of this change are fallacious and self-contradictory. The Commission should decline to upgrade Technicians automatically.

Automatic upgrades are not always wrong conceptually. The League’s proposal to upgrade all Advanced Class licensees to Amateur Extra is the right thing to do.

Advanced Class licensees have shown the Commission a wide range of knowledge in passing a difficult test, and have gone above many of today's Extras by passing a Code test well beyond the current 5 wpm test. If streamlining the system is a priority, the Advanced Class licensees should be first in line for an upgrade.

The Amateur Radio Service is changing. As newer and better technology comes into practice, reliance on Morse Code, as useful as it may be, is on the decline. To deemphasize testing on this mode is reasonable, but Code should not be totally cast aside. Its utility and heritage should remain part of the hobby. To continue the 5 wpm Code test for the highest license class, the Amateur Extra, is something the Commission should do.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'Peter D. Baskind', with a stylized flourish at the end.

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